DOCUMENT RESUME

ED 127 066 RC 009 343

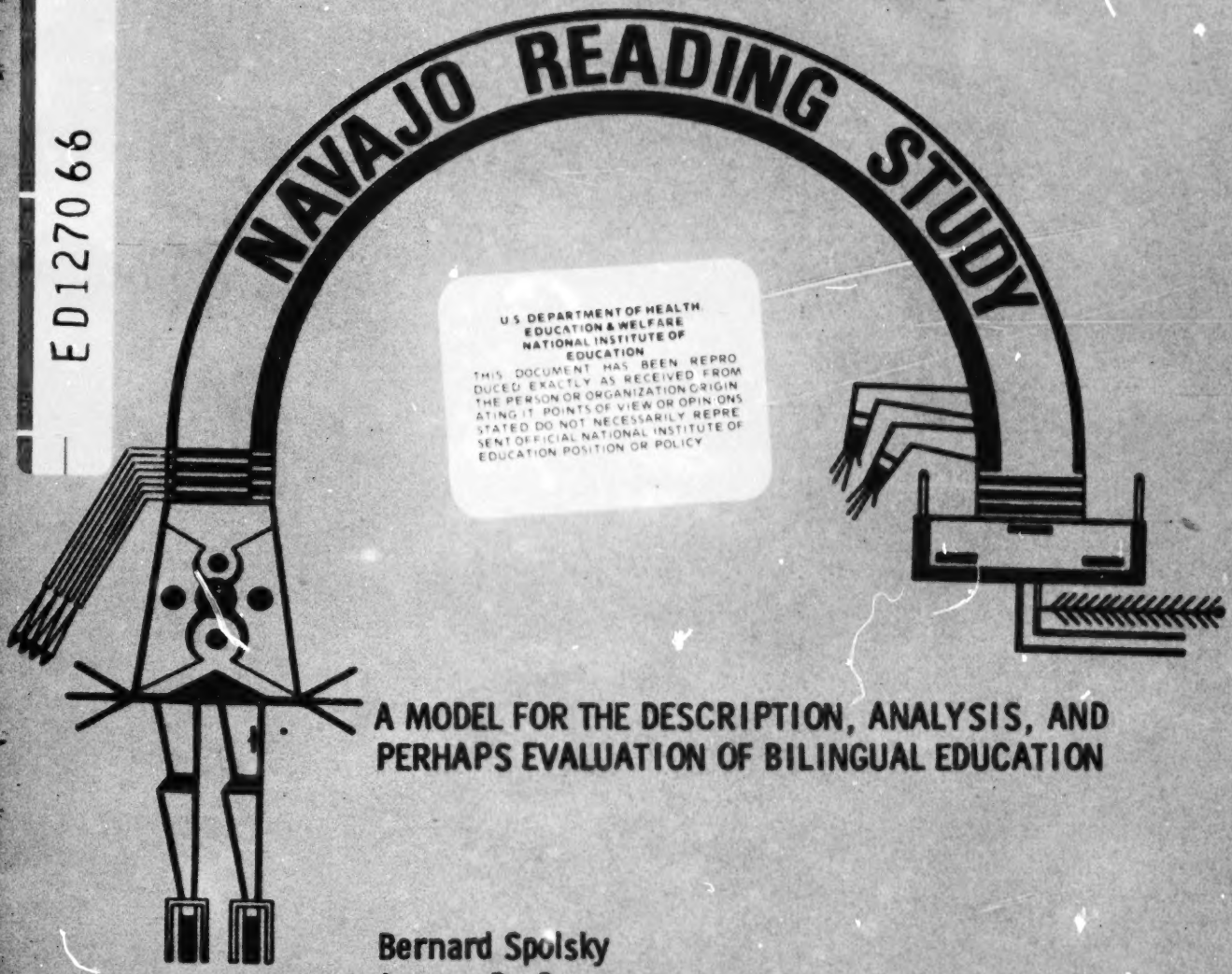
AUTHOR	Spolsky, Bernard; And Others
TITLE	A Model for the Description, Analysis, and Perhaps Evaluation of Bilingual Education. Navajo Reading Study Progress Report No. 23.
INSTITUTION	New Mexico Univ., Albuquerque. Navajo Reading Study.
SPONS AGENCY	Bureau of Indian Affairs (Dept. of Interior), Albuquerque, N. Mex.; Ford Foundation, New York, N.Y.
PUB DATE	Feb 74
NOTE	41p.; For related documents, see ED 069 461, ED 078 715, and RC 009 342-346
EDRS PRICE	MF-$0.83 HC-$2.06 Plus Postage.
DESCRIPTORS	*American Indians; *Bilingual Education; Community Involvement; Cultural Factors; Educational Planning; Evaluation Criteria; Language Attitudes; *Models; Needs Assessment; Organizational Theories; *Performance Criteria; Policy Formation; Political Influences; *Program Evaluation; Psychological Needs; Socioeconomic Influences
IDENTIFIERS	Navajo Reading Study

ABSTRACT

The model attempts to map all relevant factors onto a single integrated structure and to suggest some of the interaction lines. Based on a hexagonal figure, each side represents a set of factors which may have a bearing on, or be affected by, the bilingual program's operation in a particular situation--psychological, sociological, economic, political, religio-cultural, and linguistic. A seventh set of factors are the educational ones. The model comprises three of the hexagons. Representing the total situation of a community before the program's introduction, the first hexagon includes any relevant socio-educational entity, ranging from a village or neighborhood through a school district, a geographically-focused ethnic group, province, region, or nation. The second one deals with those factors which are more or less controlled by the people administering the program, or which may be directly influenced by the program's operation--i.e., the sources of the program's basic needs, the constraints within which the administrators have to work, the program's contribution to the community, and potential reasons for the program's failure. The third hexagon sets out the program's effects which may be on the individual participant or on the community at large. This report discusses the model, exemplifies the various factors, and outlines the interrelations between factors within and between the hexagons. (NQ)

Documents acquired by ERIC include many informal unpublished materials not available from other sources. ERIC makes every effort to obtain the best copy available. Nevertheless, items of marginal reproducibility are often encountered and this affects the quality of the microfiche and hardcopy reproductions ERIC makes available via the ERIC Document Reproduction Service (EDRS). EDRS is not responsible for the quality of the original document. Reproductions supplied by EDRS are the best that can be made from the original.

ED127066



U.S. DEPARTMENT OF HEALTH
EDUCATION & WELFARE
NATIONAL INSTITUTE OF
EDUCATION
THIS DOCUMENT HAS BEEN REPRODUCED EXACTLY AS RECEIVED FROM THE PERSON OR ORGANIZATION ORIGINATING IT. POINTS OF VIEW OR OPINIONS STATED DO NOT NECESSARILY REPRESENT OFFICIAL NATIONAL INSTITUTE OF EDUCATION POSITION OR POLICY

A MODEL FOR THE DESCRIPTION, ANALYSIS, AND PERHAPS EVALUATION OF BILINGUAL EDUCATION

Bernard Spolsky
Joanna B. Green
John Read

Navajo Reading Study Progress Report No. 23
The University of New Mexico, February 1974

RC009343

This is the* preliminary version of a paper prepared at the invitation of the Research Committee on Sociolinguistics for the Section on Educational Policies on Language and the Use of Language in Science and Technology of the VIII World Congress of Sociology, 1974.

The Navajo Reading Study at the University of New Mexico is supported by grants from the Ford Foundation and contracts with the Bureau of Indian Affairs.

Bernard Spolsky is Professor of Linguistics, Elementary Education, and Anthropology at the University of New Mexico, and director of the Navajo Reading Study. Joanna Green and John Read are research assistants in the Navajo Reading Study.

* not scheduled for a revision. August 1976

One of the results of the renewed interest in bilingual education in the United States has been a rash of Federal support for programs and a demand for accurate evaluation of the effects of these programs. For some time, American bilingual educators wrote and spoke as though they were pioneers in a new field. It is still the case that many people operating bilingual programs believe their problems and solutions to be unique. But there has been increasing recognition that bilingual education is extensive in time, space, and kind. The antiquity of bilingual education has been shown by Lewis (1965 and to appear); programs in various parts of the world are starting to be described (Spolsky and Cooper, to appear); and attempts have been made to fit these various kinds of programs into some consistent framework (Mackey 1970, Fishman and Lovas 1970).

All this work has made clear the complexity of the concept of bilingual education, and the wide diversity of the situations in which it occurs, the forms that it takes, and the results that it can have. Given this complexity, it is no wonder that the evaluation of programs becomes extremely difficult.

Consider the problem of a school system trying to decide whether or not to implement a bilingual education program. Among all the data, which are relevant to its special needs?

How should one reconcile the superiority of bilinguals found in one study with their inferiority in another? How does one understand the success of a home school language switch for English children in Montreal, and its failure for Navajo children on the Reservation? How can an expert give advice, or administrator judge an expert and his advice? Or consider the problem of an educator conducting a bilingual program. Which of the many possible outcomes should he measure in order to decide for himself on the effectiveness of his program? Should it be scores on tests in the standard language or the vernacular that receive the most emphasis? How can non-educational outcomes--changes in economic or political power, for example--be weighed along with all the others?

It is to make a first attempt to meet some of these needs that the present informal model is proposed. In the model, we try to map all the relevant factors onto a single integrated structure and to suggest some of the lines of interconnection. The model is based on a hexagonal figure. Each side of the hexagon represents a set of factors that may have a bearing on, or be affected by, the operation of a bilingual program in a particular situation. The six sets of factors are labelled psychological, sociological, economic, political, religio-cultural and linguistic. Not all of the

factors will be equally--or even at all--relevant in an individual case but, since our aim is to make the model as universally applicable as possible, the full range of factors is presented, with no special concern at this stage for their relative significance. It is important to note that there are no dividing lines within the figure, to remind one of the fact that the various factors overlap and interact with one another in a manner that cannot be adequately represented without sacrificing the simplicity required of the basic model. For this reason, too, there is a certain arbitrariness about placement of the categories in relation to each other around the figure. The order chosen is one that we consider reasonable, but others are certainly possible.

In the center of the figure, we locate a seventh set of factors, the educational ones. This is not done to assert the primacy of these factors. In fact, our main purpose is to show how relatively insignificant educational considerations may be, both in the decision whether or not to establish a bilingual program and in the evaluation of a program's "success" in reaching its goals. However, we are engaged in the study of an educational activity and it is appropriate to recognize this by placing education in the middle as the focus of the figure, while the other factors circumscribe and shape it on all sides.

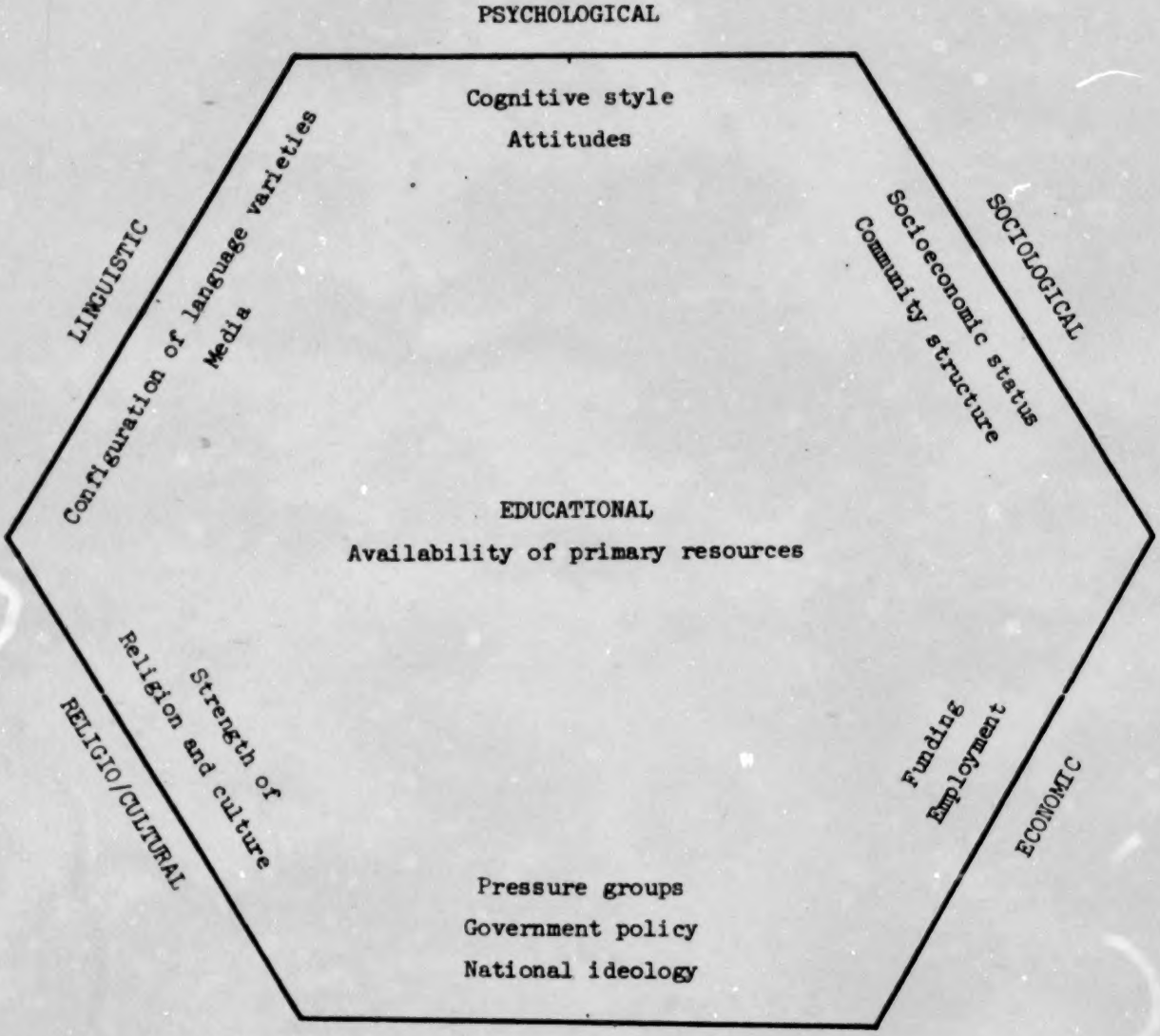


Figure 1a. The Situational Level

(to go before page 4.)

The model comprises three of these hexagons. The first represents the total situation of a community before a bilingual program is introduced. Here "community" should be understood to include any relevant socio-educational entity, ranging from a village or neighborhood through a school district, a geographically-focussed ethnic group, a province, a region to a whole nation. The model is intended to be broad enough to deal with the consideration of bilingual education at all of these levels. It sets out the whole range of factors that should, ideally, be taken into account in deciding on the establishment of a bilingual program.

We acknowledge that the decision will not always be in favor of such a program; the factors chosen have both positive and negative values in relation to bilingual education, so that in some situations they produce reasons why it is not introduced. For example, it may simply be uneconomic if the target group is small in numbers or if there are many small groups involved, each with their own language. Then again, politics may prove decisive if the control of education is in the hands of people unsympathetic to bilingual education, and its proponents have neither access to political power themselves nor the ability to marshal public or official opinion in support of their proposal.

It is at the situational level that one could make something of a case for a seven-sided figure, so that educational factors would be placed on a par with the others.

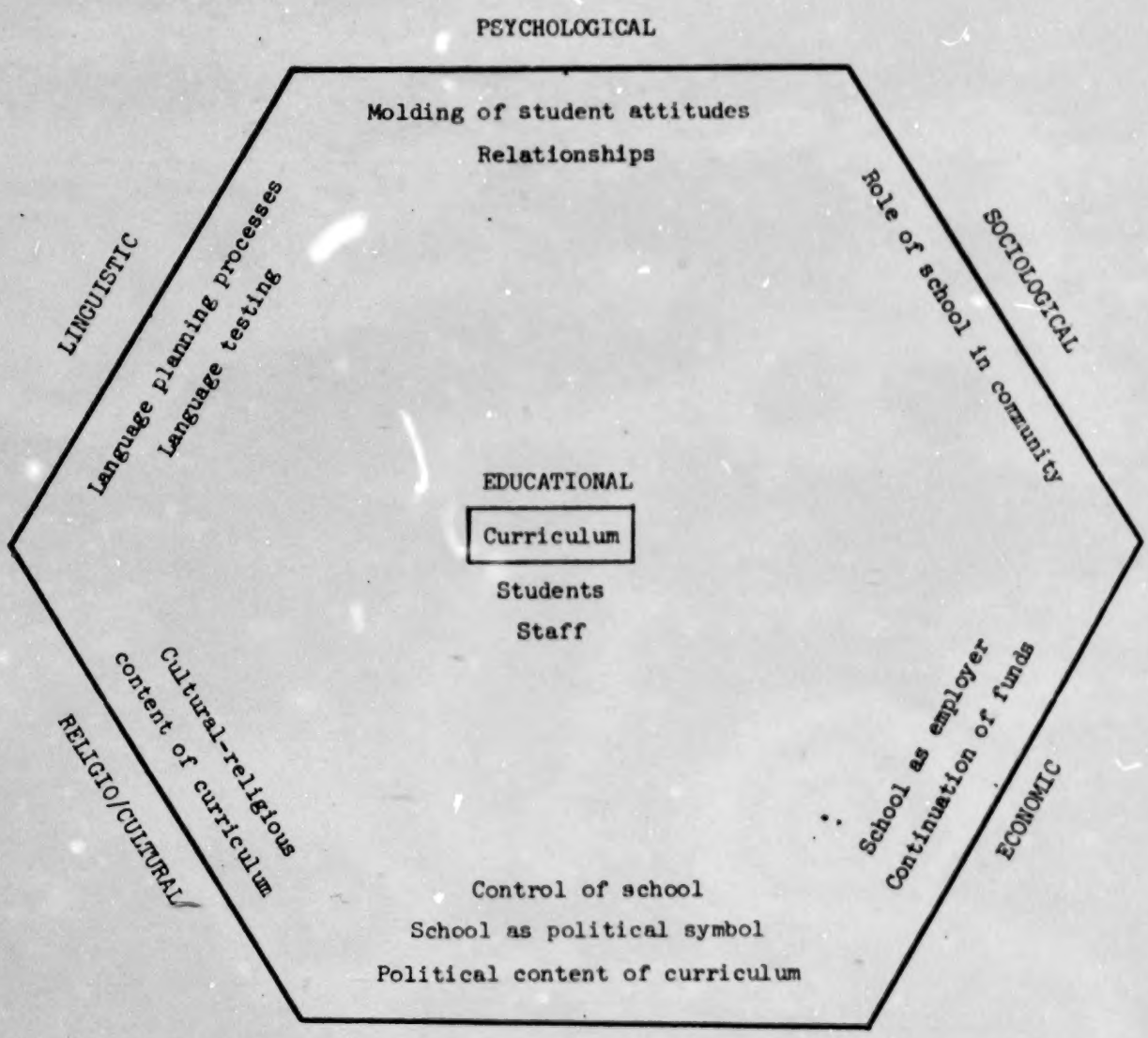


Figure 1b. The Operational Level

(to go before page 5.)

This would emphasize that, although an educational decision is being made, educational factors are not necessarily the most important ones, even when the decision is ostensibly made on the basis of them.

The second hexagon incorporates those factors that are more or less under the control of the people administering a bilingual program, or which may be directly influenced by the operation of the program. The prime factor here is the central element of the whole model, the sine qua non of bilingual education: the use of the two languages as media of instruction and, in particular, their distribution in the school curriculum. One would like to think that this is a purely educational matter, but even this decision may be subject to the influence of other factors. There may be pressure from outside to restrict the use of one of the languages, because "undue emphasis" on one is interpreted as a denigration of the culture and people to which the other language belongs. Or, one language may have insufficient linguistic development to be used in the teaching of certain subject matter; the necessary range of books written in the language may be lacking.

The fact is that there is a considerable interpenetration of the school and the wider community. Educational activities affect the life and constitution of the community, while social factors have their influence on the school.

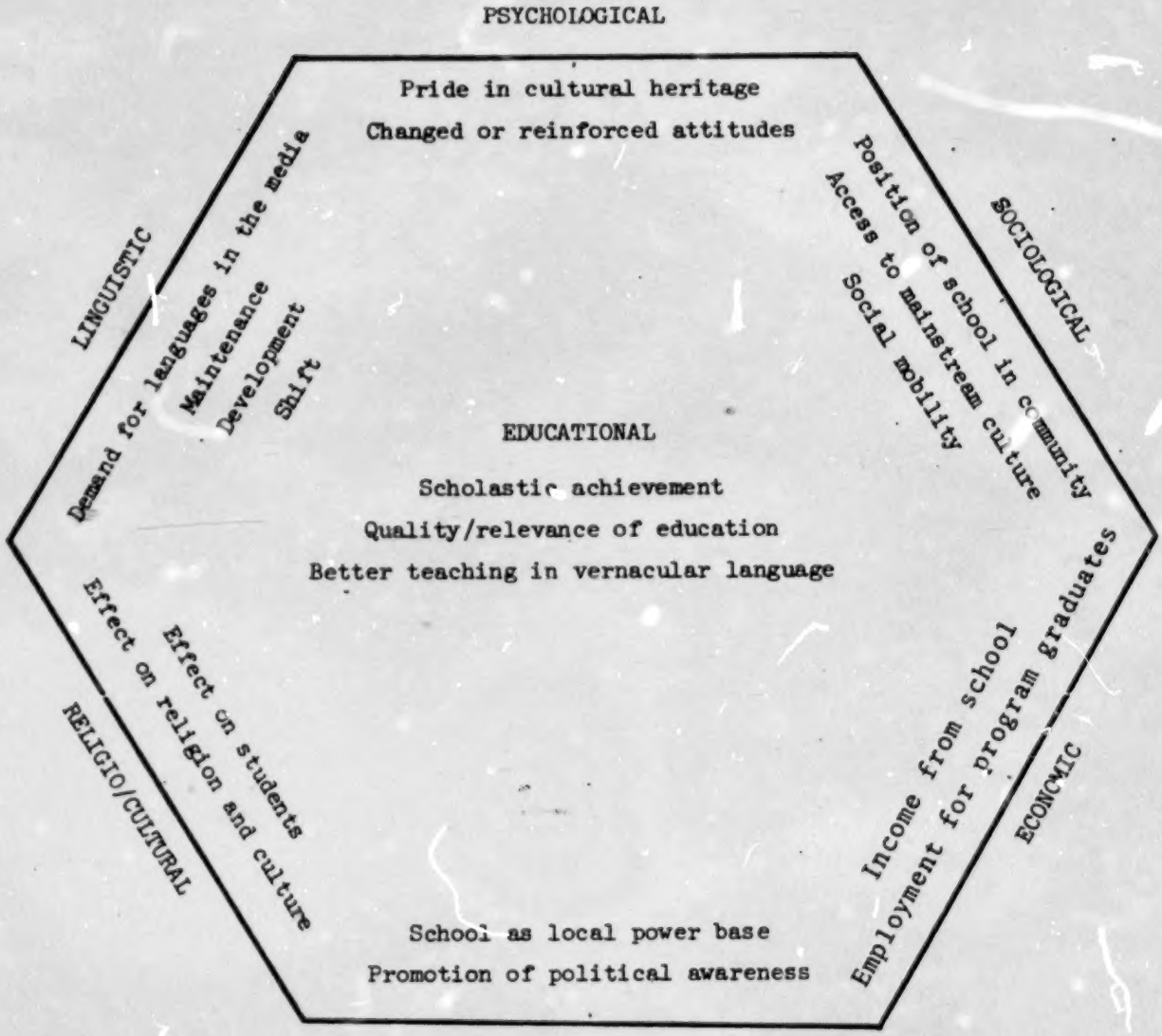


Figure 1c. The Level of OUtcomes.

(to go before page 7.)

Even in stable polities in which a right to academic freedom and independent inquiry is recognized, it may be misleading to assume that any educational decision is made in isolation from non-educational factors. In many countries, the link between education and national ideology is quite explicit.

So it is crucial to know who the decision-makers are and the framework in which they operate. They may be the superintendent of a school district, his specialist advisors and the principals of the schools in the district, who are seeking to improve the educational performance of a large number of their pupils whose mother tongue is not the normal medium of instruction in the schools; or they may be the top educational bureaucrats in a nation, decreeing that bilingual education shall be instituted nation-wide in terms of a directive from their political superiors, who are in turn responding to pressure from ethnic groups demanding recognition of their languages in the education system and elsewhere; or perhaps they are a group representative of the community that a particular school serves--local politicians, ethnic group leaders, parents, educators, ordinary citizens--who desire for the children an education rooted in the values of the local community and one that will allow them to contribute to the maintenance and development of the community in the future..

These various groups of decision-makers will have different priorities, according to their motivation and their goals. This will affect the nature and level of the interchange between school and community in ways that the second hexagon is intended to indicate.

The first hexagon, then, represents factors that predate and are independent of a bilingual program, whereas the second one deals with factors involved in the interaction of the school with the outside world upon the introduction of bilingual education. The latter includes the sources of the program's basic needs (funds, personnel, materials), the constraints within which the administrators have to work, the program's contribution to the community, and potential reasons for the program's failure.

The third hexagon sets out the effects of a bilingual program. The effects may be on the individual participant or on the community at large. Included here are both the explicit goals of those who have planned the program, and unintended outcomes or by-products of it. It is important to make this distinction, because the planners often have too narrow an appreciation of what the program involves. Unforeseen outcomes may go unrecognized or be misinterpreted if they are not related systematically to an outline of the total situation such as the one we present in our first hexagon. For example, the planners of a program may establish

as their primary goal an improvement in the children's educational achievement as measured by standard intelligence tests, but find that no such improvement results from the program. They may interpret this in terms of a lack of educability or genetic deficiency or the ineffectiveness of bilingual education. However, it could well be that they were unaware of strong attitudes against the program among the parents, attitudes that the children translated into a passive resistance to learning. Such a situation is aggravated if there is a linguistic or cultural barrier between the educators and the parents.

One major problem, particularly in relation to effects, is that of stating the various factors in quantifiable terms. This is not so necessary at the initial, descriptive stage of developing the model but it assumes greater significance when we enter the area of evaluation and prediction. Ultimately it will not suffice to state merely that such-and-such a factor is present in the situation under study and that it is likely to have some effect; there will be a demand to measure the influence it actually has. One of the reasons for the narrowness of the evaluation of bilingual programs at present may be that suitable means of measuring the non-educational factors are simply not available. There is quite a challenge here to produce such instruments. Expertise is required not only in

education and linguistics but also in the other disciplines specializing in the various factors we have identified.

Even in those first two disciplines, there are deficiencies to be overcome. In education, there is increasing concern about the quality or "relevance" of schooling and this may be a reason given for adopting bilingual education. But first we must know what people mean by "quality" in this context. Do they mean that the children feel happy and secure in school? Or that the school program is tailored to the capacities of each individual pupil? Or that learning takes place in harmony with the cognitive style which the children have inherited? This kind of clarification is necessary before we can begin to think about measuring quality. Perhaps, in the final analysis, quality is unquantifiable. In linguistics we have methods of describing language varieties in structural terms, but sociolinguistic analysis is somewhat less advanced. There is a need for better measures of the degree of bilingualism, more sophisticated interpretations of code-switching, and language testing instruments that assess more accurately a person's competence, both linguistic and communicative.

More generally there is the problem of establishing to what extent the bilingual program is responsible for

sociolinguistic phenomena that are identified as possible effects and to what extent the phenomena are the products of other influences independent of the education system, i.e. they would have appeared even in the absence of the bilingual program. This presumably applies to other non-educational factors as well.

And to them we now turn briefly. Economic analysis is required to measure the impact on the local economy of new income generated by the bilingual program, especially in small communities where this source of income has hitherto not been available. Of relevance to economists, too, is the effect of the program on the local employment situation. If a principal goal was to improve the students' employability upon leaving school, it is necessary to know whether more of them have been able to obtain better jobs than would otherwise have been expected. Related to this is the sociological concept of social mobility, measured in terms of the individual's ability--and desire--to improve his socio-economic status. Psychologists, anthropologists and political scientists also have their contribution to make to the evaluation process from the perspective of their own disciplines.

So the content of the third hexagon takes us well beyond the classroom, both in space and time. It deals with

the effects of bilingual education on the wider society, including people who have not participated in the program. In the case of those who have participated, it is concerned with their later worklife and adult experiences generally, just as much as their educational attainment.

To make the distinction between the second and third hexagons clearer: the second contains factors that have a direct bearing on the operation of a program, things that the administrators can manipulate, or that they must take into account, in the day-to-day activities of the staff and students. The third one takes a broader view of goals and outcomes including those which the administrators may not recognize or over which they have little direct control.

For the purpose of clarity, the hexagons contain a minimum of writing, comprising a set of headings or key words. They should be studied in conjunction with the accompanying inventory in which the factors are set out in greater detail (see Appendix). Further discussion and exemplification of the factors are provided later in this paper, together with an outline of the interrelations between factors within and between the hexagons. At present, there seems to be no suitable way of integratinga comprehensive account of the interrelationships of factors with the basic model as we now conceive it. We can

only present some interesting chains of factors with causative links from situations with which we are familiar, in order to illustrate how great the ramifications of bilingual education can be.

The three hexagons are not to be seen merely as functioning in the linear order in which they have been presented so far. There is more involved than an orderly progression from the pre-existing situation through the operation of a program to its effects. For example, before a program is introduced, the planners must consider the goals they are aiming for and decide whether they are attainable in the light of the situational factors. The goals selected will also influence the way that the program is administered. Similarly, an evaluation of progress after several years of operation would need to include data on the situation prior to the program, in order to establish changes during the period under study.

The model is intended to be developed and used at a number of stages. The first is exploratory: we will use it to explore the potential relationships between the various elements in it. The second stage will be descriptive: we will attempt to use the model to explain particular language education policies as results of specific situations in order to achieve certain perceived outcomes. In its fully developed state, the model should hopefully be predictive; it should be possible to use it to predict the effect on various parts

of the system of manipulation of any one part. In this final stage, it will of course be necessary to formalize the model and quantify the various elements.

In describing what is essentially the effect of language education policy, it is appropriate to consider first the linguistic factors. Various suggestions have been made for the description of a speech community, however small or large, and its communicative networks. The data which form the base for a sociolinguistic description necessarily include an initial statement of the languages or significant varieties spoken, the numbers of speakers of each, the domains in which each is used, and the modes (spoken or written). The description might focus on the complete community or start with the individual child. In any case, it will need to distinguish between the school and the people who make it up (the administrators, the non-professional staff, the teachers, and the students) and the community outside the school. From this description will emerge a general configuration of languages within the community concerned. Usually, there will be some distinction between standardized and local varieties or languages; often, the complete pattern will form one version or another of diglossia. The description of the sociolinguistic situation will need to focus specifically on literacy in each of the varieties of languages. Going beyond this, it will describe the opportunities to hear or read each of the varieties in the public media: radio, television, newspapers,

and books. The first focus in this area of linguistic description will be language use: in order to measure the situation, language testing in the various functional skills will be needed. A second dimension of the linguistic situation will be the state of standardization and development of each of the languages and varieties. Of the various types of language, three are most relevant: world languages, standardized languages, and local vernaculars. A world language, that is a language used over wide areas of the world, is one that provides access to modern culture, science, technology, and economic life and is closely associated with what Lewis provisionally calls a civic culture. A standard language is one that is accepted for full use within the political unit involved and permits expression of a wide range of cultural, scientific, technological, and economic notions. A local vernacular, or a social or regional dialect, tends to be unstandardized and to lack vocabulary and possibly styles to handle significant areas of technology and modern life. While the whole range of possibilities is clearly a continuum, there are two related but separate dimensions: the provision of access to advanced science and technology and the provision of access to literacy and modern life. The description of the varieties in these terms will usually refer to the existence of dictionaries, grammars, established orthography, and provision for lexical development and standardization.

It is in this last area that the language situation is modifiable and most often needs to be modified in order to meet educational needs. The various processes of language planning, language standardization and modernization, might be considered the focus of a purely sociolinguistic model of bilingual education. That is to say, where in this model we have chosen an aspect of curriculum as the central factor, from the point of view of the sociolinguist language planning is the fulcrum of his involvement. Linguistic expertise is relevant in two areas of the operation of a bilingual program. First, in order to measure linguistic achievement, language testing in the various functional skills will be needed. A second contribution by linguists is in the standardization and development of each of the languages and varieties.

Bilingual education may be seen as having three possible linguistic outcomes: it may involve either language maintenance or language shift and in either case it may also call for language development (modernization and standardization). The goals of a bilingual program may be transitional bilingualism, partial bilingualism (one form of which is monoliterate bilingualism), or full bilingualism. These linguistic outcomes may be reflected in the public media, in terms of a demand for new opportunities to hear and read the language varieties being used in bilingual programs.

These linguistic elements occur of course within a society; it is important that they be related to the sociological description of the community concerned. A second set of factors then consist of sociological elements. Most relevant to this model would seem to be first of all the sociological structure of the community and secondly the social status of the members of the school community, students and teachers. For the former, it is necessary to make clear how the community is organized, what ways it has of expressing its opinions and what organizations within it are capable of developing attitudes towards education in general and language use in particular. Within the sociological description, it is necessary to relate the various languages and varieties described earlier to the socioeconomic status of the speakers. What social mobility is there? What is the status of each of the languages and of the groups that use the languages? Making up this status, what is the occupation, education, and income of the speakers of the various languages? The key factor in the sociological dimension is probably summed up in some general statement of the ability of speakers of various languages or varieties to assimilate in the wider society. Languages function both as badges of group membership and as barriers to social mobility. When we move then to the sociological outcomes and goals of bilingual education the most important involve access or assimilation to the mainstream culture (perhaps a civic culture),

with resulting social mobility and opportunity for higher socioeconomic status. A second dimension of problems here involve the place of school within the local society. It may function for instance as an alien institution breaking down traditional social patterns, or with the changes involved as a result of a bilingual education program, may become the focus for community action and social cohesion.

From the sociological, it is natural to move to the political elements involved. One of the key questions here is where control of the school actually resides. Is it local, regional, or national? What are the policies of the governmental units at each of these levels in regard to willingness to support education economically, attitudes towards development of the region and its people, and attitudes towards language itself? On the political dimension also there is the element of the existence of nationalistic or ethnic pressure groups which are likely to establish or call for the establishment of specific language policies. Moving to the political goals associated with bilingual education, the key question is again the level of control. It is often the case that a bilingual policy becomes the focus to establish parental or community control of the educational system. It might equally well be the case that the bilingual educational program is intended to strengthen wupralocal control, to unify communities into a larger political unit. Thus, in a new nation, bilingual education may become the method of establishing national unity. Among the political

outcomes of bilingual education, there can be community control of the school, meaning that the local community can use the school as a power base. In many communities, the only salaried jobs are those associated with the schools. With bilingual programs, there is need for jobs for speakers of the local language. These teachers and nonprofessional workers then form an economically secure group capable of taking political leadership within the community. In broader terms, we can see the school as a political symbol representing the values of those who control it. Thus it may stand for a variety of things ranging from foreign imperialism and the suppression of minority rights to full local self-determination.

The economic dimension is closely related to the political. One element has already been mentioned: government policy and the willingness to provide funds for local education for teachers and schools and for curriculum materials. To the extent that funds are centrally controlled, a modification of educational policy will depend on central willingness to support any changes. This effect has been very clear in the United States where federal interest in bilingual education has provided economic pressure at the local school level to establish bilingual programs. The model also needs to account for the economic relevance of the linguistic situation. This may be looked at in various ways. First of

all, dependent on the sociolinguistic situation, linguistic skills become a key part of job skills. Within certain communities, certain positions demand knowledge of one or more varieties and a bilingual education program will be affected by this. There is an equally real factor in the existence of local attitudes or prejudices and their influence on the ability to obtain jobs. In many communities, accent or dialectal variety can be used by employers in order to recognize membership in a low status group. Another important economic factor is the general level of employment in the community concerned. When there are very few jobs, a bilingual education program can become the means of providing local employment for speakers of the local vernacular. This means that a considerable responsibility may rest on the school administrators in their hiring of staff. There is likely to be a conflict between the principle of employing the person with the best paper qualifications and a desire to maximize local involvement in--and benefit from--the school. The economic outcomes of bilingual education are therefore potentially two-fold. One dimension of effects is the development of better job skills or better opportunities for work for the students after they graduate; the second dimension is the immediate provision of higher income for specific members of the community who will be required as staff in a bilingual school and not required in the same way in a monolingual school.

A further dimension that needs to be described within the community is the cultural or religious. While it is not necessarily the case, it often happens that a culture or religion (or ideology) is most clearly expressed by a specific language or variety. The maintenance or revival of a specific religion, culture, or ideology can thus become translated by a nationalistic, ethnic, religious, or political pressure group into the impetus for a bilingual education program. Similarly, in attempts to build national identity, there will often be the discovery or re-discovery of a great tradition, with its associated language. (Fishman 1972) Bilingual education therefore can have as goal or outcome the maintenance or revival of a specific culture or religion or it may have as goal or outcome the ability to function comfortably in more than one culture or religion.

These last four sets of dimensions--the cultural-religious, political, economic, and sociological--form the basis for a set of psychological attitudes. In any situation, it becomes necessary to consider the attitudes of five groups--the dominant group in the wider society, the community itself, the parents, the educators, and the students--to four subjects: to the languages and varieties (and their speakers), to school and the general aims of education, and finally to bilingual education itself. These attitudes will depend not just on the factors referred to so far but also on people's perceptions

of the real or imagined cognitive effects of bilingualism. That is to say, if it is believed that bilingualism is good, bilingual education is likely to be considered valuable; if bilingualism is considered harmful, every effort will be made to avoid producing bilinguals. Related to these attitudes will be certain outcomes or goals. Arising out of a general pride in cultural heritage, a bilingual education program is often seen as a way of preserving the positive self-concept of the speakers of one of the languages involved. Depending on the attitudinal situation, a bilingual program may be seen as a way of improving students' attitudes towards speakers of other languages, of making it easier for parents and community to relate to education and so improve attitudes to the school, or as a way of changing the educators' attitudes towards children who speak minority languages.

Another psychological factor is the concept of cognitive style. Recent research (Stodolsky and Lesser 1967, Cohen 1969) has shown that cognitive functioning varies according to social class and ethnic group. Schools tend to operate on the basis of one cognitive style, whereas a large proportion of their students have a different one. Thus, since those who establish bilingual programs are often just as concerned with the overall quality of education as with the specific matter of language teaching, it is necessary for them to insure that the organization of the school and the style of its teaching are not in

conflict with the children's characteristic patterns of cognition.

All these dimensions within this model are seen as feeding into the educational situation. Description of a bilingual education program will need to involve a number of dimensions. First are the students. How are they selected? Is education universal or general? What is the linguistic, cultural, and educational background of students in general? Is attendance universal? What happens to migrant children? How easy is it for children living in remote areas to come to school? Are the roads good, does the climate make daily bussing possible, or is it necessary for children to be boarded? What are the potential physical, nutritional, and cultural disadvantages of children in the school? The second element to be described are the teachers. How are they selected? Are they themselves bilingual members of the local community, or do they come from somewhere else? Where are they trained and by whom? What does their training involve? Is their training restricted to pre-service training? Is there continuous in-service training? How well are they paid and do they live in the community? Do their accommodation and salary distinguish them from the general community that they are serving? Who are the school administrators? Are they answerable to the local community or to local, regional, or central government? How do they relate to the local community and to any centralized

government and bureaucracy? What degree of control do they have over funding? Then there is the question of nonprofessional and semiprofessional staff in the school. Are there aides? If so, how are they trained and paid? What is their status within the classroom? What is their relationship to the community? The description moves then to the matters connected with the curriculum. A bilingual education program obviously requires textbooks and readers. How easily are they available in the various languages concerned? How much would it cost to develop them? On the basis of this comes the central feature on which the model focuses. Within the curriculum, which language or variety is chosen for each of the subjects? Is the division one based on time (ie. one language in the morning, the other in the afternoon) or subject (technological subjects in the standard language, cultural subjects in the local language)? At what time is the standard variety introduced, especially if it is required as a medium of instruction at higher levels?

The specifically educational outcomes of bilingual education are fourfold. Bilingual education may be seen as a method of improving the quality of education in general, as a means of making education relevant to the specific community, as a means of teaching the standard non-vernacular language better, or as a method of improving school achievement in general as measured by retention or examination results.

In the description so far, some attempts have already been made to make clear some of the possible connections between various parts of the model. To give some idea of its potential, in the remainder of the paper we will give very sketchy descriptions of three distinct bilingual education programs. The first is bilingual education as it appears to function at the moment on the Navajo reservation. While there is some variation from district to district, those schools on the Navajo reservation that have shown interest in bilingual education are generally schools where most children come to school with knowledge only of Navajo. The Navajo situation can be described as a kind of diglossia where Navajo is the language used for all spoken purposes while English is used for all written purposes and for all relations with the outside community and with non-Navajo institutions. While the language has been written for some time, there is little literacy in Navajo. There are a couple of dictionaries and a number of grammars, and there has been considerable lexical development over the past thirty years. At the same time, the language is not yet sufficiently modernized for it to be easy to teach technological subjects even in the first grades. On the reservation, one can listen to the radio in Navajo or in English; it is hard to find printed matter in Navajo but easy to find it in English. Navajo traditional sociological

patterns did not involve complex social organization. The basic structures beyond the family and the clan have been imposed from outside for the political needs of the central government. Physical isolation means that there is little social mobility. The reservation is poor, unemployment is high. There is a struggle between the federally controlled bureaucracy and the newly developing Navajo political groups.

In the Navajo situation, the most important outcome of bilingual education is probably related to changes in the economic and political situation. At the moment, the 53,000 Navajo students in school, 90% of whom speak Navajo, are taught by 2600 teachers, only 100 of whom speak Navajo. A decision to establish bilingual education, even a transitional variety for the first three grades, sets up a need for a thousand Navajo speaking teachers. Whatever effects this may have on the educational or linguistic situation, it is clear that it immediately provides jobs within the community for a sizable group of people. A thousand well-paying jobs on the reservation for Navajos would lead to a greater income not just for the teachers themselves but for the community as a whole and would immediately establish within the community a well-paid middle class whose potential influence on political development of the Navajo Nation is obvious. Whatever may then be the expressed goals of a bilingual education program,

it is probable that its major effect will be in this area. The political effect of bilingual education is to assure not just development of this group but also community control of school and teachers and so the integration of the school into community life.

A second example that might be described in this model is the situation in Micronesia (cf Trifonovitch 1971). Micronesia can be characterized linguistically as consisting of a large number of small local vernaculars with English as the lingua franca. There is spoken use of these vernaculars in most areas, and written use in some. English is used only as a lingua franca when speakers of various vernaculars are forced into contact and for contact with government and tourists. There is literacy in many of the varieties, associated usually with church. There are however few dictionaries or grammars, the orthographies are not well established, and lexical development has probably been slow. While schools are centrally controlled, effective leadership is slowly coming into the hands of Micronesian bureaucrats. It is generally believed necessary to speak English in order to obtain good jobs. There is very high unemployment with very few jobs outside of the main centers. Traditional social structures remain strong and appear to co-exist with the newer imposed institutions.

When one looks at the present educational system, it is clear that bilingual education is the unofficial fact simply

because teachers and students are speakers of the vernacular. While all materials are in English, and the curriculum assumes that most teaching is done in English, in actual fact teaching all the way through the school system is done in the local language. A bilingual education program for Micronesia then is not so much a change of curriculum as a legitimization of present practice. It can be seen then probably as a way of trying to teach English better and at the same time as a formal recognition of the relationship between the traditional culture and the school.

The third example to be considered is the St. Lambert experiment, a school in Montreal where parents have chosen to have their children taught in French as much as possible (cf Lambert and Tucker, 1972). The general sociolinguistic situation in Montreal has been fully described. English speakers are a minority and are seldom bilingual. French speakers form the majority and many of them also know English. Each language is fully developed, with the full status of a world language. On the other hand, the social status of speakers of French is lower than that of speakers of English. Political pressures are slowly counteracting this. The growth of the separatist movement caused considerable concern to English speaking Montrealers and one of the reactions to this is the bilingual program. In this situation, the aim of the St. Lambert

program has been to produce full bilingualism, but not necessarily biculturalism. The students produced by the program are anticipated to have better attitudes to the French majority, and will hopefully have continued access to economic advancement even as French political power increases.

These descriptions have been sketchy and will need much fuller development to make clear the limitations and possibilities of the model. But they will it is hoped help show some of its potential for distinguishing between various kinds of bilingual education, various situations in which bilingual education occurs, and the many different outcomes which may be relevant to a specific program.

References

Cohen, Rosalie A. 1969. "Conceptual Styles, Cultural Conflict, and Nonverbal Tests of Intelligence", American Anthropologist 71, 828-856.

Fishman, Joshua A. 1972. Language and Nationalism. Rowley, Mass: Newbury House.

_____, and John Lovas. 1970. "Bilingual Education in a Sociolinguistic Perspective", TESOL Quarterly 4,

Lambert, Wallace E., and G. Richard Tucker. 1972. Bilingual Education of Children: The St. Lambert Experiment. Rowley, Mass: Newbury House.

Lewis, E. Glyn. 1965. "Bilingualism--Some Aspects of its History", Report on an International Seminar on Bilingualism in Education. London: HMSO, 64-84.

_____. To appear. "Bilingualism and Bilingual Education in the Ancient World".

Mackey, William F. 1970. "A Typology of Bilingual Education", Foreign Language Annals 3, 596-608.

Spolsky, Bernard, and Robert L. Cooper, editors. To appear. Current Trends in Bilingual Education. The Hague: Mouton.

Stodolsky, Susan, and G. Lesser. 1967. "Learning Patterns in the Disadvantaged", Harvard Educational Review 37, 546-593.

Trifonovitch, Gregory J. 1971. "Language Policy, Language Engineering, and Literacy: Trust Territory of the Pacific Islands", In Linguistics in Oceania (Current Trends in Linguistics, Volume 8) 1063-1087. The Hague: Mouton.

APPENDIX

Inventory of Factors

LINGUISTIC

Situation

- Language varieties and their configuration:
  - structural description (including existence of dictionaries, grammars)
  - census of speakers
  - domains of use
  - modes: spoken, written
  - status and geographical spread
- Media:
  - Literacy
    - number of literates in each variety
    - prestige of literacy
    - amount of written material (in which language varieties?)
    - availability of material
    - existence of literary 'Great Tradition'
    - existence of standard orthography
  - Radio, television, film:
    - language varieties used
    - audience 'ratings' for different varieties
    - availability

Operation

- Language planning processes:
  - Standardization and development of the media of instruction (if necessary)
    - production of dictionaries and grammars
    - establishment of orthographies
    - development of language(s) to handle new concepts
- Language testing:
  - Means of assessing competence (linguistic and communicative) in each variety in all modes

Outcomes

- Sociolinguistic effects:
  - language maintenance
  - language shift
  - language development
- Demand for use of language varieties in the public media: newspapers, books, radio, television, film.

PSYCHOLOGICAL

Situation
- Attitudes:
  - held by
    - wider society (especially the dominant group)
    - local community
    - parents
    - educators
    - students
  - towards
    - themselves and their own group
    - the language varieties and their speakers
    - school
    - general aims of education
    - bilingual education
- Cognitive style:
  - of school
  - of students and their culture

Operation
- Relationships:
  - between
    - teachers and students
    - teachers and parents
    - school and community
    - school and education system
- Efforts to mold student attitudes

Outcomes
- Pride in cultural heritage
- Effects of program on attitudes
  - reduced ethnocentrism
  - confirmed prejudice
  - enhanced self-concept

SOCIOLOGICAL

Situation
- Social structure of community
  - stratification and mobility
  - degree of ethnic integration
  - channels for expression of public opinion
  - influence of opinion-forming political, cultural and educational organizations
- Socio-economic status
  - of
    - the languages and their speakers
    - the students and their families
    - the school and its teachers

SOCIOLOGICAL - continued

Operation
- Role of school in community

Outcomes
- Access to mainstream (civic) culture:
  - wider awareness
  - urbanization
  - assimilation
- Social mobility:
  - for
    - individuals
    - families
    - ethnic groups
  - comprising
    - hardening of class boundaries
    - upward movement
    - formation of new class or whole new stratification system
- Position of school in community:
  - alien institution
  - focus of community action and social cohesion

ECONOMIC

Situation
- Funding:
  - availability of funds to meet program costs
  - Government economic policy relating to educational funding
- Employment:
  - importance of linguistic ability in obtaining jobs
  - effect of employer preferences/prejudices
  - general level of (un)employment

Operation
- Continuation of funds:
  - funding assured for specified period or indefinitely
  - annual reapplication and appropriation required
  - need to seek supplementary funds
  - need for complete new source of funds after initial (experimental) period
- School as employer:
  - availability of jobs for administrators, teachers, aides, resource persons, secretaries, maintenance staff
  - school hiring policy

Outcomes
- Employment for program graduates
  - adequate linguistic ability
  - other job skills
  - availability of jobs

ECONOMIC - continued

Outcomes - continued
- Income from school:
  - for
    - school employees
    - community at large

POLITICAL

Situation
- National ideology:
  - centralization, statism
  - pluralism, diversity
  - assimilation of minorities
- Government policy:
  - relating to
    - language
    - education
    - national development
    - the economy
- Pressure groups:
  - nationalist, ethnic, religious, economic

Operation
- Control of school:
  - exercised by
    - parents and local community
    - local educators
    - supralocal bureaucracy
    - centralized national organization
- Political content of curriculum
- School as political symbol
  - representing
    - imperialism
    - non-indigenous values and interests
    - national ideology
    - cultural pluralism
    - local self-determination

Outcomes
- Promotion of political awareness
  - concerning
    - national ideology
    - government policies
    - national or ethnic identity
    - community goals
- School as local power base

RELIGIO/CULTURAL

Situation

Existence and strength of culture(s) and religion(s) in community:
- expressed most appropriately in particular language or variety

Language attitude of local indigenous and non-indigenous religious groups

Operation

Cultural/religious content of curriculum

Outcomes

Effect on religion or culture:
- maintenance
- revival
- elimination

Effect on students:
- ability to function across cultural or religious boundaries

EDUCATIONAL

Situation

Availability of primary resources
- students
- teachers
- building(s)
- materials
- funds

Operation

Students
- selection: age-range, background
- attendance: transportation, accommodation
- disadvantages: physical, nutritional, cultural
- abilities: learning style, special talents

Teachers
- selection
  - bilingual or monolingual persons
  - from the local community or outside
- training
  - "on site" or in training institution elsewhere
  - content: educational, cultural, linguistic
  - pre-service, in-service
- salaries, accommodation

Paraprofessionals
- selection
- training
- duties
- status

EDUCATIONAL - continued

Operation - continued
- Administration
  - relation to
    - local community
    - educational bureaucracy
    - local, regional, central government
- Curriculum
  - choice of languages as media of instruction
  - distribution of languages by time and by subject
  - use of local or standard language varieties
  - focus on local ('low') or wider ('high') culture
- Materials
  - texts, readers, reference works, audio-visual aids, cultural artifacts
    - availability
    - need for production by school
    - costs
- Assessment
  - linguistic achievement
  - achievement in other learning areas

Outcomes
- Improvement in quality of education
- Relevance of education to community
- Better teaching of non-vernacular language
- Improvement in general school achievement
  - retention of students
  - examination results